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MYOCARDIAL ISCHEMIA AND INFARCTION

HIGH PREVALENCE OF ABNORMAL CORONARY VASOMOTION IN PATIENTS WITH ANGINA DESPITE NORMAL CORONARY ANGIOGRAMS

ACC Poster Contributions
Ernest N. Morial Convention Center, Hall F
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Session Title: Stable Ischemic Syndrome: Invasive Insights I
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Background: Recent reports indicate that despite a typical clinical presentation with angina pectoris suggestive of coronary artery disease (CAD), >50% of patients undergoing diagnostic angiography have normal or 'near' (<50% stenosis) normal coronary arteries. These patients are often considered to have non-cardiac chest pain and reassured without further investigation. However, we speculated that abnormal coronary vasomotion may represent an alternative explanation. The aim of this study was to determine the prevalence of abnormal coronary vasoconstriction leading to angina in patients with angina pectoris but normal coronary arteriograms.

Methods and Results: We prospectively assessed 321 consecutive patients (50% men, mean age 68 years) undergoing diagnostic angiography for chest pain suggestive of CAD. 143 patients (45%) had coronary artery stenoses >50% diameter reduction and 178 (55%) stenoses <50% (159 had completely normal coronary arteries by angiography). 157 of the 178 (88%) underwent coronary artery vasoreactivity testing with intracoronary acetylcholine. Fifty-two patients (33%) developed diffuse >75% diameter reduction associated with angina and/or diagnostic ST-segment changes and 48 microvascular spasm (31%) i.e. typical chest pain and ischemic ECG changes (that were relieved by nitrate administration) without epicardial coronary vasoconstriction.

Conclusions: Over 50% of patients undergoing diagnostic angiography for angina had no obstructive CAD. Intracoronary acetylcholine provocation triggered marked coronary vasoconstriction that caused angina and ST-segment changes in the majority of these patients. These results suggest that intracoronary acetylcholine provocation should be considered in patients with suspected CAD who are found to have normal coronary arteriograms or non-obstructive coronary artery stenosis. A positive acetylcholine test establishes a diagnosis in these patients and avoids unnecessary testing for gastrointestinal or orthopaedic causes of chest pain.